

**LATE SEASON MANAGEMENT OF TARNISHED PLANT BUG (*LYGUS LINEOLARIS*) IN COTTON
(*GOSSYPIMUM HIRSUTUM*)**

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Abstract

The tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois) is an important economic pest of cotton, *Gossypium hirsutum* (L.) in the Midsouth region of the United States. This pest damages developing flower buds (squares) and fruit (bolls) during reproductive stages of cotton. Damage to small squares and bolls usually results in abscission of those structures. On older squares, feeding injury may not cause abscission but can lead to malformed flowers that may not fertilize properly. On larger bolls, feeding from tarnished plant bug can lead to dark sunken lesions on the outer boll wall, formation of warts on the inner boll wall, and discoloration of lint and seeds. Continuous season long infestations may result in four or more insecticide applications per growing season. Consequently, many growers have replaced cotton producing acres with other crops such as soybean and corn. This is a result of escalating input costs because of insecticides being applied at maximum use rates due to resistant populations increasing throughout the season. These applications commonly include costly two- to three-way insecticide mixes until the crop reaches insecticide termination timing. However, these late season applications may only be preventing minor losses when compared to overall yield. Although there is much controversy, there may be an opportunity to increase thresholds and possibly eliminate one to two insecticide applications with further research in late season management. Other variables include different planting dates, insect pressure, and variety planted. The objective of this study is to focus on tarnished plant bug management in late season cotton development. For producers seeking to minimize input costs with late season applications, further research may identify opportunities to reduce applications after the fourth week of bloom.